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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,642

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Peter Heymann

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EXAMINER

KHATRI, PRASHANT J

ART UNIT

PAPER NUMBER

1794

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,642	<b>Applicant(s)</b> HEYMANN, PETER	
	<b>Examiner</b> PRASHANT J. KHATRI	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,10-14,16 and 17 is/are rejected.
- 7) ☒ Claim(s) 3-9, 15, and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/24/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 3-9, 15, and 18 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and/or cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Furthermore, claim 18 is drawn to two sets of claims to different features (i.e. the process and the structure). Accordingly, claims 4-9, 15, and 18 have not been further treated on the merits.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-2, 10-14, and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The use of the terms “preferably”, “almost”, “such as”, and “especially” render the claims to be indefinite. Furthermore, it is noted that the claims in general are in European format and not in acknowledged U.S. format. In regard to claims 1, it is unclear what the term “similar” would encompass. Furthermore, including the phrases “consisting essentially of” and “consist of” in the same claim is unclear as the former limits the scope of the layer to the specified materials and those that do not materially affect the basic and novel characteristics of the invention, meanwhile the latter excludes any material that is not

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specified and thus, it is not clear what is included in the layers. Appropriate correction is required.

4. Claims 10, 12, and 16 contain the trademark/trade name “K-resin”. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a modified polystyrene and, accordingly, the identification/description is indefinite.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindemann et al. (**US 5462794**).

7. Lindemann et al. disclose a multilayer sheet (**FIG. 1**) comprising a thermoplastic foam core layer (**element 13**) laminated to a top (**element 12**) and bottom (**element 14**)

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multi-resin material. The foam core layer is comprised of a styrenic resin based material and can be modified by with acrylates and butadiene (**col. 7 bridged to 8, lines 65+**). The top and bottom layers are comprised of virgin impact polystyrene (**col. 6, lines 21+**). Furthermore, prior art discloses the laminate made by extrusion coating an extruded foam core (**col. 6, lines 35+**). Examiner takes the position that the extrusion coating of the extruded foam core simultaneously, as pointed out by prior art (**col. 6, lines 45+**) is equivalent to the broadest sense of coextrusion as the process provides a continuous production process. Additionally, prior art discloses the thickness of each of the multi-resin layers is from about 1.0 mils to 7.0 mils. Therefore, the overall laminate comprising the foam and the multi-resin layers will be greater than 2.0 mils. The total weight of the laminate is 25.9 g/100 in<sup>2</sup> and the two multi-resin layers (**layer 1 and 4**) have a total weight of 8.9 g/100 in<sup>2</sup>, which yields a total weight percentage of about 34.

8. While it is recognized that the phrase “consisting essentially of” narrows the scope of the claims to the specified materials and those which do not materially affect the basic and novel characteristics of the claimed invention, absent a clear indication of what the basic and novel characteristics are, “consisting essentially of” is construed as equivalent to “comprising”. Further, the burden is on the applicant to show that the additional ingredients in the prior art, i.e. polyethylenes and EVOH, would in fact be excluded from the claims and that such ingredients would materially change the characteristics of the applicant’s invention, See MPEP 2111.03.

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9. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Freeman (**US 4946532**).

10. Freeman discloses a composite film (**FIG. 1**) comprising an inner layer (**element 12**), and two outer layers (**elements 14 & 16**). The layers are comprised of polymers or copolymers of polystyrene and ABS among a group (**col. 2, lines 54+**). Furthermore, prior art discloses the thickness of the laminate is of about 0.5 mils to 10 or more mils (**col. 4, lines 3+**) and the processing of said laminate is done by coextrusion (**col. 5, lines 59+**).

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-2, 10-13, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karabedian (**US 4581262**) in view of Osswald (**Table 1**), Heider (**US 5405667**), and Dibiasi (**US 4489020**).

13. Karabedian (**US 4581262**) discloses a coextruded multilayer sheet for use on plastic containers. The sheet comprises of a foamed polystyrene that can be modified by various acrylates (**col. 4, lines 16+**). The skin is disposed on a surface of the foam and comprises of a polystyrene (**col. 2, lines 37+**). Regarding the lack of opacity, Examiner notes that foams are inherently hazy and not transparent because of the

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formation of voids and therefore considered to be inherently opaque. The label has a thickness from about 4-12 mils for the foam and the skin layer of about  $\frac{1}{4}$  to  $\frac{1}{2}$  to 5 mils in thickness (**col. 4, lines 28+**). Examiner considers the total thickness of the film to be the sums of the above disclosed thicknesses. Furthermore, prior art discloses the laminate shrinks with the application of heat (**col. 3, lines 40+**). Examiner notes that the process of extrusion orients the polymer chains to be parallel with the machine direction; therefore, the material would shrink in the extruded direction with the application of heat. Regarding the weight/thickness elements claimed by Applicant, prior art discloses low density polystyrene foam has a density of about 3 lbs/ft<sup>3</sup> and for a high density foam, from about 15 lbs/cubic foot to 50 lbs/ft<sup>3</sup>. Examiner takes the position that the foams the density of foams of a material will be less than the total density of an unfoamed material of the same; therefore, the weight/thickness ratio of a foamed material, which would weigh less than an unfoamed material of the same would be less than the weight/thickness ratio of an unfoamed material, which by density would weigh more. Thus, the weight of the two outer layers would be greater than that of the foam. Examiner notes that prior art is using a polystyrene skin layer but does not disclose the density of said layer. Additionally, prior art does not disclose a bottom layer and the process of bubble blowing.

14. Osswald discloses the density of unfoamed polystyrene is about 1.05 g/cm<sup>3</sup>, which when converted is about 66 lbs/ft<sup>3</sup>. Furthermore, Examiner would like to note that the density of foamed materials will be less than the density of material unfoamed as it is known in the art that blowing agents will introduce voids and spaces within the

material, which would decrease the density. Furthermore, it is noted that the density when converted into a weight/thickness ratio will be less for the foam as the weight/thickness ratio of a foam is less than the ratio for a unfoamed material.

15. Heider discloses a multilayer label (**FIG. 2**) comprising a foam layer (**element 18**) disposed between an outer layer (**element 23**) and inner layer (**element 15**). Prior art discloses the inner layer comprises of a material with a melting point like that of the container and the outer layer is a polystyrene (**col. 3, lines 34+**). Examiner notes that if the material the bottle is comprised of is polystyrene, the inner layer would be a polystyrene-based material according to the guidelines set forth by prior art. Furthermore, prior art discloses the label is blown into a bubble to be disposed on a blown molded container (**col. 5, lines 9+**).

16. Dibiasi teaches the method of forming polystyrene containers that can be unfoamed (**col. 2, lines 29+**). Furthermore, the applications of heat-shrinkable labels are known within the art as they provide information or advertising material about the product.

17. While it is recognized that the phrase “consisting essentially of” narrows the scope of the claims to the specified materials and those which do not materially affect the basic and novel characteristics of the claimed invention, absent a clear indication of what the basic and novel characteristics are, “consisting essentially of” is construed as equivalent to “comprising”. Further, the burden is on the applicant to show that the additional ingredients in the prior art, i.e. polyethylene and olefin polymers, would in fact



be excluded from the claims and that such ingredients would materially change the characteristics of the applicant's invention, See MPEP 2111.03.

18. All of the above elements are known separately within the art. The only distinction is the combination of the above elements into a single invention. Motivation to apply the bottom layer is that the bottom layer provides better adhesion of the label to the bottle surface than just the foam. Thus, it would have been obvious to one with ordinary skill in the art to apply a bottom layer to the laminate disclosed by Karabedian to better adhere a label to a container that is polystyrene.

19. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindemann et al. in view of Gutierrez-Villarreal (**US 5756577**).

20. For claim 14, prior art discloses within the background that reclaimed material has been used in coextrusion processes of multi-layer laminates comprising at least six layers (**col. 3, lines 11+**).

21. Gutierrez-Villarreal discloses that styrenic-based heat shrink films can be recycled and reused (**abstract**).

22. Lindemann discloses the use of reclaimed material within the multi-resin layers and Gutierrez-Villarreal discloses that the styrenic-resins can be recycled. It would have been obvious to add a further film of recycled material within the laminate. Motivation lies in the fact that further layers provide a structurally sound material that can be resistant to tears and punctures.

***Conclusion***

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yoshii et al. (***JP 09114380***) discloses a heat shrinkable layer but uses the foam on the outer layer. Yoshii et al. (***JP 11338356***) discloses the above as well.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRASHANT J. KHATRI whose telephone number is (571)270-3470. The examiner can normally be reached on M-F 8:00 A.M.-5:00 P.M. (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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